



US 20190351964A1

(19) **United States**(12) **Patent Application Publication**
Chen(10) **Pub. No.: US 2019/0351964 A1**(43) **Pub. Date: Nov. 21, 2019**(54) **TRANSPORTATION DEVICE WITH
SELECTIVE ENABLING OF FORE-AFT
AUTO-BALANCING****B62J 99/00** (2006.01)**B62K 23/08** (2006.01)(52) **U.S. Cl.**CPC **B62K 11/007** (2016.11); **B62K 1/00**
(2013.01); **B62J 2099/002** (2013.01); **B62K**
23/08 (2013.01); **B62J 99/00** (2013.01)(71) Applicant: **Shane Chen**, Camas, WA (US)(72) Inventor: **Shane Chen**, Camas, WA (US)(21) Appl. No.: **16/283,733**(22) Filed: **Feb. 22, 2019****Related U.S. Application Data**(60) Provisional application No. 62/634,115, filed on Feb.
22, 2018.**Publication Classification**(51) **Int. Cl.****B62K 11/00** (2006.01)**B62K 1/00** (2006.01)(57) **ABSTRACT**

A central wheel structure transportation device with fore-aft auto-balancing. The auto-balancing is selective enabled (and disable) to improve rider experience, safety and ease of mounting and use. In one embodiment, during mounting, auto-balancing is not enabled until the lateral tilt angle of the device is below a given threshold. Fore-aft sensors, lateral tilt sensors, foot presence sensors, and/or accelerometers, or the like, may be used in various combinations to affect device operation and performance.

